

What is claimed is:

1. A simulator which imparts vibrations to an operator by driving a vibration mechanism in accordance with a generation of a given simulation state, the simulator  
5 comprising:

a simulation calculation section which performs a simulation calculation to manipulate a simulator object in accordance with an operational input from an object operating section;

a vibration mechanism control section which drives the vibration mechanism on  
10 condition that a predetermined vibration occurrence simulation state has occurred; and

a vibration condition setting section which receives a vibration condition setting which specifies the vibration occurrence simulation state, by an operational input from an operating section for vibration condition setting,

wherein the vibration condition setting section performs condition setting  
15 processing to receive a setting of a vibration content which includes at least one of vibration intensity, a vibration pattern and vibration length of the vibration mechanism, in the vibration occurrence simulation state specified by the vibration condition setting, and

wherein the vibration mechanism control section drives the vibration  
20 mechanism relating to the set vibration content, when the vibration occurrence simulation state specified by the vibration condition setting occurs.

2. The simulator as defined by claim 1,

wherein the vibration condition setting section performs condition setting  
25 processing to display a vibration condition setting image on a display and receive the vibration condition setting by an operation input from the operating section for vibration condition setting to store in a storage section.

3. The simulator as defined by claim 1,

wherein when a plurality of the simulation states occur simultaneously as conditions that cause the vibration mechanism to vibrate, the vibration mechanism control section synthesizes a plurality of the vibration contents that have been set by the vibration content setting section and controls the vibration mechanism.

4. The simulator as defined by claim 2,

wherein when a plurality of the simulation states occur simultaneously as conditions that cause the vibration mechanism to vibrate, the vibration mechanism control section synthesizes a plurality of the vibration contents that have been set by the vibration content setting section and controls the vibration mechanism.

5. The simulator as defined by claim 1,

wherein when a plurality of the simulation states occur simultaneously as conditions that cause the vibration mechanism to vibrate, the vibration mechanism control section controls the vibration mechanism in accordance with degrees of priority assigned to the simulation states.

6. The simulator as defined by claim 2,

wherein when a plurality of the simulation states occur simultaneously as conditions that cause the vibration mechanism to vibrate, the vibration mechanism control section controls the vibration mechanism in accordance with degrees of priority assigned to the simulation states.

7. The simulator as defined by claim 3,

wherein when a plurality of the simulation states occur simultaneously as

conditions that cause the vibration mechanism to vibrate, the vibration mechanism control section controls the vibration mechanism in accordance with degrees of priority assigned to the simulation states.

- 5     8.     A method of controlling a simulator which imparts vibrations to an operator by driving a vibration mechanism in accordance with a generation of a given simulation state, the method comprising:

         a simulation calculation step in which a simulation calculation is performed to manipulate a simulator object in accordance with an operational input from an object  
10    operating section;

         a vibration mechanism control step in which the vibration mechanism is driven on condition that a predetermined vibration occurrence simulation state has occurred; and

         a vibration condition setting step in which a vibration condition setting, which  
15    specifies the vibration occurrence simulation state, is received by an operational input from an operating section for vibration condition setting,

         wherein the vibration condition setting step includes performing condition setting processing to receive a setting of a vibration content which includes at least one of vibration intensity, a vibration pattern and vibration length of the vibration  
20    mechanism, in the vibration occurrence simulation state specified by the vibration condition setting, and

         wherein the vibration mechanism control step includes performing processing to drive the vibration mechanism relating to the set vibration content when the vibration occurrence simulation state specified by the vibration condition setting occurs.

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9.     The method of controlling a simulator as defined in claim 8,  
         wherein the vibration condition setting step includes performing condition

setting processing to display a vibration condition setting image on a display and receive the vibration condition setting by an operation input from the operating section for vibration condition setting to store in a storage section.

- 5     10.     The method of controlling a simulator as defined in claim 8,  
             wherein the vibration mechanism control step includes synthesizing a plurality  
             of the vibration contents that have been set in the vibration content setting step and  
             controlling the vibration mechanism when a plurality of the simulation states occur  
             simultaneously as conditions that cause the vibration mechanism to vibrate.

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11.     The method of controlling a simulator as defined in claim 9,  
             wherein the vibration mechanism control step includes synthesizing a plurality  
             of the vibration contents that have been set in the vibration content setting step and  
             controlling the vibration mechanism when a plurality of the simulation states occur  
15     simultaneously as conditions that cause the vibration mechanism to vibrate.

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12.     The method of controlling a simulator as defined in claim 8,  
             wherein the vibration mechanism control step includes controlling the vibration  
             mechanism in accordance with degrees of priority assigned to the simulation states  
20     when a plurality of the simulation states occur simultaneously as conditions that cause  
             the vibration mechanism to vibrate.

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13.     The method of controlling a simulator as defined in claim 9,  
             wherein the vibration mechanism control step includes controlling the vibration  
25     mechanism in accordance with degrees of priority assigned to the simulation states  
             when a plurality of the simulation states occur simultaneously as conditions that cause  
             the vibration mechanism to vibrate.

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14. The method of controlling a simulator as defined in claim 10,

wherein the vibration mechanism control step includes controlling the vibration mechanism in accordance with degrees of priority assigned to the simulation states  
5 when a plurality of the simulation states occur simultaneously as conditions that cause the vibration mechanism to vibrate.

15. A program for implementing the method as defined by claim 8.

10 16. A program for implementing the method as defined by claim 9.

17. A computer-readable information storage medium which stores the program defined by claim 15.